Amdt. Dated: May 6, 2004

Reply to Office Action of March 23, 2004

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the

application.

Listing of Claims:

33. (Currently Amended) A balloon catheter, comprising

a) a multilayer balloon comprising a polymeric first layer having a plasma

polymerized functionality covalently bonded to at least a section of a first surface of the first

layer, and a polymeric second layer, the second layer being bonded to the section of the first

surface of the first layer which has the plasma polymerized functionality covalently bonded

thereto so that the plasma polymerized functionality is between the first and second layers, and

the plasma polymerized functionality forming a film having a thickness of about 10 to about 150

nanometers; and

b) an elongated shaft having an inflation lumen, and bonded to the balloon, so that

an interior of the balloon is in fluid communication with the inflation lumen.

34. (Currently Amended) The balloon catheter of claim 33 wherein the first layer is

an outer layer of the balloon and the second layer is an inner layer of the balloon, so that the first

surface of the first layer which has the plasma polymerized functionality covalently bonded

thereto bonded to the second layer is an inner surface of the first layer.

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35. (Previously Presented) The balloon catheter of claim 33 wherein the first layer is fusion bonded to the second layer.

36. (Previously Presented) The balloon catheter of claim 33 wherein the plasma polymerized functionality is selected from the group consisting of carboxylate, amine, and sulfate.

37. (Canceled)

- 38. (Currently Amended) The balloon catheter of claim [[33]] 34 wherein the balloon has proximal and distal skirt sections bonded to the shaft, and the <u>inner surface of the</u> first layer along at least a portion of the proximal and distal skirts skirt sections of the balloon has an inner surface which has the plasma polymerized functionality bonded thereto[[,]] and which is bonded to the shaft, so that the plasma polymerized functionality located along the portion of the proximal and distal skirt sections is between the first layer and the shaft.
- 39. (Previously Presented) The balloon catheter of claim 33 wherein the first layer is formed at least in part of a polymeric material selected from the group consisting of a fluoropolymer, polytetrafluoroethylene, expanded polytetrafluoroethylene, and ultra high molecular weight polyethylene.

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40. (Previously Presented) The balloon catheter of claim 33 wherein the first layer is

formed at least in part of a polymeric material having a node and fibril microstructure.

41. (Previously Presented) The balloon catheter of claim 33 wherein the plasma

polymerized functionality comprises a film having a thickness of about 50 nm to about 125 nm.

42. (New) A balloon catheter, comprising

a) a multilayer balloon comprising a polymeric first layer having a plasma

polymerized functionality covalently bonded to at least a section of a first surface of the first

layer, and a polymeric second layer, the second layer being bonded to the section of the first

surface of the first layer which has the plasma polymerized functionality covalently bonded

thereto so that the plasma polymerized functionality is between the first and second layers, and

the plasma polymerized functionality forming a film having a thickness of about 10 to about 150

nanometers and being plasma polymerized acrylic acid; and

b) an elongated shaft having an inflation lumen, and bonded to the balloon, so that

an interior of the balloon is in fluid communication with the inflation lumen.

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